From the INTERNATIONAL SEARCHING AUTHORITY

To: BRIAN M. DUGAN DUGAN & DUGAN,PC 245 SAW MILL RIVER ROAD SUITE 309 HAWTHORNE, NY 10532	PCT  NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION	
	(PCT Rule 44.1)	
	Date of mailing (day/month/year)	
Applicant's or agent's file reference	FOR FURTHER ACTION See paragraphs 1 and 4 below	
11855/PCT		
International application No. PCT/US2008/001589	International filing date (day/month/year) 05 February 2008	
Applicant APPLIED MATERIALS, INC.		
1. The applicant is hereby notified that the international search report and the written opinion of the International Search Authority have been established and are transmitted herewith.  Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46): When? The time limit for filing such amendments is normally two months from the date of transmittal of international search report.  Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35  For more detailed instructions, see the notes on the accompanying sheet.  2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith  With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:  the protest together with the decision thereon has been transmitted to the International Bureau together with applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.  4. Reminders  Shortly after the expiration of 18 months from the priority date, the international application will be published by International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international protein application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.3 and 90bis.3, respective for the completion of the technical preparations for international publication.  The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to International Bureau. The International Bureau will s		
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginla 22313-1450  Authorized officer: Blaine R. Copenheaver		
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Telephone No.

571-272-7774

Facsimile No. 571-273-3201

From the INTERNATIONAL SEARCHING AUTHORITY

To: BRIAN M. DUGAN DUGAN & DUGAN,PC 245 SAW MILL RIVER ROAD SUITE 309 HAWTHORNE, NY 10532	NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION  (PCT Rule 44.1)			
	(day/month/year) 03 JUL 2008			
Applicant's or agent's file reference  FOR FURTHER ACTION See paragraphs 1 and 4 below the second se				
International application No. PCT/US2008/001589	International filing date (day/month/year) 05 February 2008			
Applicant .  APPLIED MATERIALS, INC.				
The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted berewith.  Filing of amendments and statement under Article 19: The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46): When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.  Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Faesimile No.: +41 22 740 14 35 For more detailed instructions, see the notes on the accompanying sheet.  2. The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.  3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:  the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.  no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.  4. Reminders  Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis. 1 and 90bis. 3, respectively, before the completion of the technical preparations for international publication.  The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International preparation of prope				
Name and mailing address of the ISA/US  Mail Stop PCT, Ath: ISA/US  Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450  Authorized officer:  Blaine R. Copenheaver				

Facsimile No. 571-273-3201

571-272-7774

Telephone No.

# **PCT**

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 11855/PCT	FOR FURTHER ACTION	as well a	see Form PCT/ISA/220 is, where applicable, item 5 below.	
International application No.	International filing date (day/n	nonth/year)	(Earliest) Priority Date (day/month/year)	
PCT/US2008/001589	05 February 2008	05 February 2007		
Applicant	<u> </u>			
APPLIED MATERIALS, INC.				
This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.  This international search report consists of a total of2 sheets.  It is also accompanied by a copy of each prior art document cited in this report.  I. Basis of the report  a. With regard to the language, the international search was carried out on the basis of:  the international application in the language in which it was filed  a translation of the international application into, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))  b With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.  2 Certain claims were found unsearchable (see Box No. II)				
3. Unity of invention is lact	king (see Box No. III)			
4. With regard to the title,				
the text is approved as su		. 11		
the text has been establish	ned by this Authority to read as f	onows:		
5. With regard to the abstract,	haritted by the population			
the text is approved as su the text has been establis may, within one month fr	hed according to Rule 38 2(b) b	y this Authorit ernational sear	ty as it appears in Box No. IV. The applicant report, submit comments to this Authority	
6. With regard to the drawings,				
-	be published with the abstract is	Figure No. 24		
as suggested by the			5	
	Authority, because the applicant			
	Authority, because this figure be	tter characteriz	zes the invention	
b. none of the figures is to	be published with the abstract			

#### INTERNATIONAL SEARCH REPORT

International application No. PCT/US2008/001589

A. CLASSIFICATION OF SUBJECT MATTER  IPC(8) - H01L 21/00 (2008.04)  USPC - 414/940					
	According to International Patent Classification (IPC) or to both national classification and IPC				
Minimum do IPC(8) - H01	DS SEARCHED cumentation searched (classification system followed by c L 21/00 (2008.04) 217, 331, 331.18, 940	lassification symbols)			
Documentatí	on searched other than minimum documentation to the extension	ent that such documents are included in the	fields searched		
Electronic da PatBase, Go	ta base consulted during the international search (name of ogle Patents	data base and, where practicable, search ter	ms used)		
c, docui	MENTS CONSIDERED TO BE RELEVANT				
Category*	Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.		
Х	EP 1,450,393 A2 (RICE et al) 25 August 2004 (25.08.20	004) entire document	1-4		
A	US 20060190118 A1 (TEFERRA et al) 24 August 2006	(24.08.2006) entire document	1-4		
Α	US 6,955,197 B2 (ELLIOTT et al) 18 October 2005 (18.10.2005) entire document 1-4				
Α	US 2005/0125089 A1 (PURI et al) 09 June 2005 (09.06	1-4			
А	US 2005/0273190 A1 (DUFFIN et al) 08 December 2005 (08.12.2005) entire document 1-4		1-4		
Α	US 6,082,951 A (NERING et al) 04 June 2000 (04.06.2000) entire document		1-4		
A	US 2006/0182531 A1 (SHAH et al) 17 August 2006 (17	7.08.2006) entire document	1-4		
Furth	er documents are listed in the continuation of Box C.				
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier application or patent but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than document member of the same patent family  "It later document published after the international filing date or priority date and not in conflict with the application but cited to understant the principle or theory underlying the invention cannot be considered novel or cannot be considered to involve an inventive step when the document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document combined with one or more other such documents, such combination being obvious to a person skilled in the art  "C" document published prior to the international filing date or priority date and not in conflict with the application but cited to understant the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when the document considered to involve an inventive step when t			claimed invention cannot be ered to involve an inventive claimed invention cannot be step when the document is documents, such combination e art		
Date of the	Date of the actual completion of the international search  04 June 2008  Date of mailing of the international search report  03 .1111 2008				
Mail Stop PC P.O. Box 14	nailing address of the ISA/US CT, Attn: ISA/US, Commissioner for Patents 50, Alexandria, Virginia 22313-1450 No. 571-273-3201	Authorized officer:  Blaine R. Copenhe PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774	aver		

#### From the INTERNATIONAL SEARCHING AUTHORITY

### DOT

To: BRIAN M. DUGAN DUGAN & DUGAN,PC 245 SAW MILL. RIVER ROAD SUITE 309 HAWTHORNE, NY 10532		WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY  (PCT Rule 43bis.1)		
		Date of mailing (day/month/year) 0 3 JUL 2008		
Applicant's or agent's file reference		FOR FURTHER AC	ee paragraph 2 below	
11855/PCT	1.61: 1.	<u> </u>	Priority date (day/month/year)	
***************************************	ternational filing date			
	5 February 2008		05 February 2007	
International Patent Classification (IPC) or b IPC(8) - H01L 21/00 (2008.04) USPC - 414/940 Applicant APPLIED MATERIALS, INC		tion and IPC	·	
This opinion contains indications relating	ng to the following iter	ns:		
Box No. 1 Basis of the opinion	ion			
Box No. II Priority				
<u> </u>	nt of opinion with rega	rd to novelty, inventive	step and industrial applicability	
<u></u>				
Box No. IV Lack of unity of invention			No. inventive step or industrial applicability:	
Box No. V Reasoned statement under Rule 43bis, I(a)(i) with regard to novelty, inventive step or industrial applicability citations and explanations supporting such statement			my, inventive step of including approximation	
Box No. VI Certain document	Box No. VI Certain documents cited			
Box No. VII Certain defects in	n the international appl	l application		
Box No. VIII Certain observations on the international application			,	
<ol> <li>FURTHER ACTION         If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.         If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.     </li> <li>For further options, see Form PCT/ISA/220.</li> <li>For further details, see notes to Form PCT/ISA/220.</li> </ol>				
Y Jan Cal You die	Name and mailing address of the ISA/US Date of completion of this opinion Authorized officer:			
Name and mailting address of the 1570 05 Blaine Co			Blaine Copenheaver	
Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 P.C. Helodesk: 571-272-4300				

PCT Helpdesk: 571-272-44 PCT OSP: 571-272-7774 Facsimile No. 571-273-3201

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2008/001589

Box	No. I	Basis of this opinion
1	With re	gard to the language, this opinion has been established on the basis of:
۱.		the international application in the language in which it was filed.
		a translation of the international application into which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2.		This opinion has been established taking into account the rectification of an obvious mistake authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3.	With re	gard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been hed on the basis of:
	a. typ	e of material
l	<u> </u>	a sequence listing
		table(s) related to the sequence listing
	b. for	nat of material
		on paper
		in electronic form
	c. tim	e of filing/furnishing
		contained in the international application as filed
		filed together with the international application in electronic form
		furnished subsequently to this Authority for the purposes of search
4.		In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5.	Additi	onal comments:
	•	
	•	

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2008/001589

YE
NO
YE:
NO
YE
NO

Claims 1-4 lack an inventive step under PCT Article 33(3) as being obvious over Rice et al. (hereinafter referred to as Rice). Referring to claim 1, Rice discloses a system comprising: an equipment front end module (EFEM) designed for use with a large lot substrate carrier (see Para. [0033] describing an equipment front end module for a large lot substrate carrier being used with a small lot substrate carrier) and having a large lot toadport envelope (as discussed below, an EFEM for a large lot substrate carrier must include a large lot loadport working envelope); and a small lot loadport configuration (small lot size fabrication facility 200) having a plurality of small lot loadports (carrier opening devices 210) adapted to be coupled to the EFEM (see Para. [0033] describing an equipment front end module for a large lot substrate carrier being used with a small lot substrate carrier), wherein each small lot loadport (carrier opening devices 210) is adapted to dock with a small lot substrate carrier (see Para. [0045] for the small lot size substrate carrier disclosed).

An envelope, as described by the applicant on Pg. 3, Ln. 24 through Pg. 4, Ln. 3, is the space traversed during movement of the loadport and EFEM robotics, as well as the space traversed by the substrate carrier in its normal range of motion to and from the loadport. Given that definition, in order for the large lot EFEM to work effectively and for the substrate to be processed, the large lot EFEM, disclosed by Rice in Para. [0033], its loadport (the end of the EFEM that receives the substrate carrier), and the substrate carrier must traverse a SPACE during transfer of the substrate carrier from the large lot EFEM loadport to the small lot loadport of the processing tool. This space is the large lot EFEM loadport envelope. Similarly, the space traversed by the substrate carrier from the small lot loadport to the EFEM loadport, after the substrate has been processed, is the small lot loadport envelope. Therefore, it is inherent that both the large lot EFEM loadport and the small lot loadport have envelopes.

Rice does not explicitly teach the small lot loadport configuration has a combined envelope substantially similar to the large lot loadport envelope. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the small lot loadports disclosed by Rice in such a way that they each have a combined envelope substantially similar to the large lot loadport envelope, so that the large lot EFEM can be used with a small lot loadport without having to be modified.

Referring to claim 2, Rice discloses a substrate handling apparatus comprising: a small lot loadport configuration (SLLC) (small lot size fabrication facility 200) including a plurality of small tot loadports (carrier opening devices 210), each small lot loadport (carrier opening devices 210) adapted to dock with a small lot substrate carrier (see Para. [0045] for the small lot size substrate carrier disclosed); wherein the SLLC (small lot size fabrication facility 200) is adapted to be coupled to an equipment front end module (EFEM) designed for use with a large lot substrate carrier (see Para. [0033] describing an equipment front end module for a large lot substrate carrier being used with a small lot substrate carrier) and having a large lot loadport envelope (as discussed in Claim 1, an EFEM for a large lot substrate carrier must include a large lot loadport working envelope). Rice does not explicitly teach the small lot loadport configuration (SLLC) has a combined envelope substantially similar to the large lot loadport envelope. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the small lot loadport configuration (SLLC) disclosed by Rice in such a way that it has a combined envelope substantially similar to the large lot loadport envelope, so that the large lot EFEM can be used with a small lot loadport without substantial modifications.

(Continued in Supplemental Box)

#### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2008/001589

Supplemental Bo	Su	plemei	ntal	Box
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In case the space in any of the preceding boxes is not sufficient. Continuation of:

Referring to claim 3, Rice discloses a method comprising: docking of a small lot substrate carrier (see Para. [0045] for the small lot loadport (see Para. [0045] for the substrate transfer location disclosed) within a small lot loadport configuration (small lot size fabrication facility 200; also see Fig. 2) coupled to an equipment front end module (ÉFEM) designed for use with a large lot substrate carrier (see Para. [0033] describing an equipment front end module for a large lot substrate carrier being used with a small lot substrate carrier) and having a large lot loadport envelope (as discussed in Claim 1, an EFEM for a large lot substrate carrier must include a large lot loadport working envelope), where the small lot loadport configuration (small lot size fabrication facility 200; also see Fig. 2) includes a plurality of small lot loadports (see Para. [0045] for the substrate transfer location disclosed; also see Fig. 2 where each loadport is a transfer location, indicated by carrier opening devices 210) adapted to be coupled to the EFEM (see Para. [0033] describing an equipment front end module for a large lot substrate carrier being used with a small lot substrate carrier), where each small lot loadport (see Para. [0045] for the substrate transfer location disclosed) is adapted to dock with a small lot substrate carrier (see Para. [0045] for the small lot size substrate carrier disclosed). Rice does not explicitly teach the small lot loadport configuration has a combined envelope substantially similar to the large lot loadport envelope. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the small lot loadport configuration disclosed by Rice in such a way that it has a combined envelope substantially similar to the large lot loadport envelope, so that the large lot EFEM can be used with a small lot loadport without

lot substrate carrier by the small lot loadport (carrier opening devices 210; in order for the substrate to be processed, the small lot substrate carriers must dock at a carrier opening device 210, which then opens the carriers and allows the substrates to be transferred to small lot substrate carriers can be docked at that same processing tool).

having to be modified. Referring to claim 4, the modified Rice discloses the method of claim 3, further comprising: undocking, opening and/or closing of the small processing tools 204. In order to process additional substrates, the first small lot substrate carriers must be undocked, so that subsequent Claims 1-4 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

### NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

### The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

- [Where originally there were 48 claims and after amendment of some claims there are 51]: "Claims I to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers, claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
- 2. [Where originally there were 15 claims and after amendment of all claims there are [1]: 'Claims I to 15 replaced by amended claims I to II.'
- [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding
  - "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
- [Where various kinds of amendments are made]: Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled, claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added.

### "Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

## It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

it should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

# Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a rennmary examining Admortly a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1 bis(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43bis.1(c)).

# Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the PCT Applicant's Guide, Volume II.